

PowerVu
Home Energy Monitor



PERCEPCION

Important information

Your Energy Monitor has a range of approximately 30 metres from your meter in typical suburban environments.

You can contact us by emailing na-support@percepction.com

Every effort has been made to ensure the accuracy of the information in this guide.

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Your Energy Monitor is designed in Australia and made in Malaysia. Printed in Malaysia. Patent pending.

Regulatory FCC

This product has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This product generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, which can be determined by turning the product off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the device and receiver
- Connect the device into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Warning: Any changes or modifications not expressly approved by Percepction could void the user's authority to operate this equipment

What's in the box



1 Power Adapter

2 USB Cable

3 Energy Monitor

4 Cradle

5 User Manual

Safety information

So that you can enjoy this product safely, please read and follow these safety instructions. Failure to follow these instructions could result in electric shock, fire or other injury or damage.

-  Keep your Energy Monitor dry and away from sources of liquids such as drinks, sinks, etc.
For indoor use only.
-  Use a soft, damp, lint free cloth to clean the exterior.
Avoid getting moisture into openings.
-  The battery is not user replaceable.
-  Electrical equipment may be hazardous if misused.
Always use the supplied power adapter and cable to charge your Energy Monitor.
-  Do not connect or disconnect the power adapter with wet hands.
-  Access to the power adapter should not be obstructed whilst in use.
-  You must dispose of your Energy Monitor according to local regulations. Your Energy Monitor contains a battery and other electronic components that must not be disposed of in household waste.

Safety information

 To help care for the environment, at the end of the product's life please take it to a recycling center.

 The product contains strong magnets, do not disassemble or otherwise allow magnets to be swallowed.

 This product is not a toy. Please ensure that it is kept out of reach of children under 3 years old.

 Your Energy Monitor has been designed to be robust, but it may be damaged if dropped.

 Do not use this product if it is damaged or has been exposed to liquids or excessive moisture.

 Do not attempt to open or repair this product.

 If you have any questions about the safe use or disposal of this product then please email na-support@perception.com for assistance

Getting to know your Energy Monitor



- 1** Radio signal strength indicator
- 2** Radio activity indicator
- 3** Selected view indicator
- 4** Usage indicator
- 5** Price indicator
- 6** Message display
- 7** View button
- 8** Units button
- 9** Charging / Power indicator
- 10** Low battery indicator
- 11** Usage display
- 12** Units indicators
- 13** USB socket
- 14** Reset button

Get started in three easy steps

1

Plug-in your Energy Monitor to wake it up and start charging.

Page 8

2

Connect your Energy Monitor to your meter.

Page 10

3

Place your Energy Monitor on your fridge and start monitoring your energy usage. It's that easy!

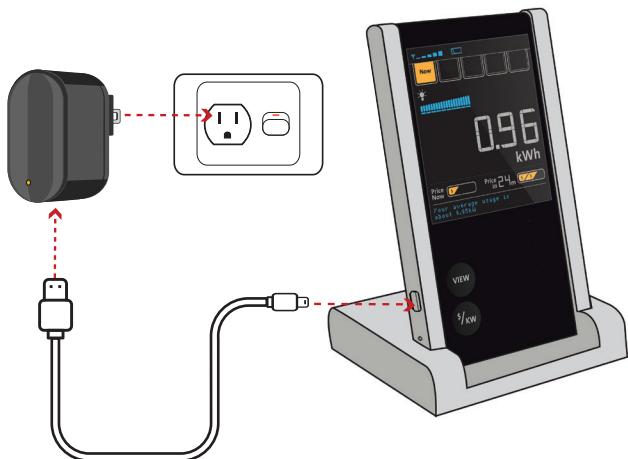
Page 12

1. Wake up and charge your Energy Monitor

Wake up

To turn on your Energy Monitor for the first time simply plug the supplied power adapter into a mains power socket and connect it to your Energy Monitor.

Your Energy Monitor will wake up and begin charging.



1. Wake up and charge your Energy Monitor

Charge

To ensure your Energy Monitor is fully charged you should leave it charging for about 3 hours before you move it to your fridge. Once it is fully charged, the Charging indicator will stop flashing. When you disconnect from the charger and move it to your fridge, your Energy Monitor will run for a few months (depending on usage) before it needs to be charged again.

LOW

- **Tip** - When the low battery indicator is shown, plug your Energy Monitor into the power adapter and place it into the supplied cradle to hold it while it's charging.

2. Connect your Energy Monitor to your Meter

Authorize your Energy Monitor

To ensure your power usage information is kept private, your Energy Monitor must be authorized to connect to the meter on your home. Each utility has their own way of doing this, so we have provided a tool on our website to help guide you through the process.

Visit percepcion.com/connect and follow the instructions to authorize your Energy Monitor.



- **Tip** - Your utility will ask you to provide the EUI-64 and Installation code for your Energy Monitor. This information is printed on your Energy Monitor's label and is also available to be copy and pasted from the Energy Monitor Application (See page 18).

2. Connect your Energy Monitor to your Meter

Connect

Once you turn on your Energy Monitor it will start searching for your electricity meter. This may take a few minutes, but once your meter is found, the Energy Monitor will automatically connect and download information about your power usage and electricity pricing.



Since your Energy Monitor makes a wireless connection to your meter, make sure you are within about 30 meters of your electricity meter.



The radio activity indicator animates each time your Energy Monitor talks with your meter.



2. Connect your Energy Monitor to your meter



If your Energy Monitor displays "No suitable meter found" it is most likely out of range of your meter.

Try moving it closer to the meter.

No suitable meter found. Touch a button to try again

3. View your power usage

Once your Energy Monitor is fully charged and connected to your meter, you can place it on your fridge.

View

Touching the view button will cycle through the different views, Now, Today, This Week and This Month.

Place on your Fridge

Your Energy Monitor will attach securely to most fridges, however, you should check to ensure it has attached securely. If your fridge does not hold your Energy Monitor securely then use the supplied cradle to place it on a bench top.



3. View your power usage

Entering your electricity prices

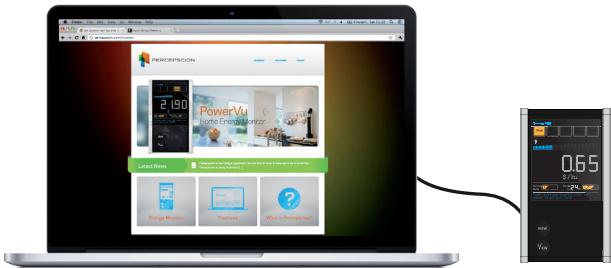
If the meter on your home does not provide your electricity pricing information automatically, you will need to manually enter them.

To do this, connect your energy monitor to a PC or MAC using the supplied USB cable. A new USB disk will appear in Windows Explorer (PC) or Finder (MAC) called 'Energy Monitor'.

Double click on the file called '**HomeEnergyMonitor.html**' to open the Energy Monitor Application.

Select the "Enter my prices" button at the top of the page and follow the on screen instructions to enter your prices and install them onto the Energy Monitor.

- **Tip** - Your electricity prices are printed on your electricity bill.



3. View your power usage

\$/kW

Touching the **\$/kW** units button will cycle between usage (kW or kWh) and cost estimate (\$/hour or \$) units. Cost display is only available once you have entered your electricity pricing to your Energy Monitor (see previous page).

- **Tip** - 1 kW is equal to 1000 watts. A typical kettle uses about 2 kW. A compact fluorescent light bulb uses about 0.01kW



'Now' view

The 'Now' view shows you how much power your home is using right now. This is shown in kW or in \$/hr depending on the units you have selected.



- **Tip** - \$/hr view shows an estimate of what your current usage would cost if it stayed the same as of right now for the next hour. Most people's actual consumption will change frequently.

3. View your power usage

Today, This Week & This Month



These views show you how much power you have used so far today, this week, or this month, in kWh or dollar estimates. They are useful to help you track your usage over different time periods to see how it has changed.

- **Tip** - kWh is what your electricity meter measures, and what your utility uses to calculate the consumption charges on your electricity bill. 1 kWh of energy is equal to 1 kW of power draw for 1 hour. A typical 2kW portable fan heater might use 2 kWh in an hour if set on high.

Usage indicator

The usage indicator provides a quick snapshot of your energy usage and indicates if your usage is high (yellow or red) or low (blue). The indicator automatically adapts to suit your household's energy usage patterns using historical usage information downloaded from your meter.



3. View your power usage

Prices

If your electricity plan is a time of use plan, where you are charged different rates for peak and off-peak then your current and next electricity prices will be shown on the price indicators. If the price is off-peak then one \$ indicator will be shown, for shoulder \$\$, and for peak \$\$\$ is shown.



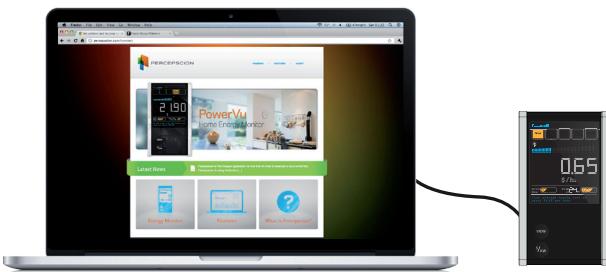
- **Tip** - The estimated costs displayed by your Energy Monitor include both your energy use charges and your service to property charges that you have entered (See Entering Your Electricity Prices on page 14).

3. View your power usage

Energy Monitor application

Your Energy Monitor can provide you with detailed power usage history by connecting it to your PC or MAC using the supplied USB cable. A new USB disk will appear in Windows Explorer (PC) or Finder (Mac) called "Energy Monitor".

Double click on the file called **'HomeEnergyMonitor.html'** to open your Energy Monitor application.



- **Tip** - Some web browsers will ask permission to run scripts when you open the Energy Monitor Application. You will need to allow these scripts to run.

3. View your power usage

The Energy Monitor application shows your past energy usage for up to seven weeks. Move the mouse over the bars in the chart to see how much energy you used that day and how much it cost. Click on a bar and a pop up window will show your usage for the day in hourly bars.



If you have solar electricity then your solar feed-in kWh or \$ will appear below the line in orange.

- **Tip** - To refresh the data in the Energy Monitor Application you need to disconnect your Energy Monitor from your PC or Mac and re-connect it.

Troubleshooting your Energy Monitor

My Energy Monitor won't connect to my smart meter.

Check the signal strength indicator. If there are no bars then you may not be within range of your meter.

Try moving your Energy Monitor closer to your meter (within a few meters) and touch one of the buttons. Your Energy Monitor will then search for your meter and connect if it finds it. If your Energy Monitor still does not connect, then your Energy Monitor may not be authorized to connect to your meter - you may need to repeat the instruction in the section **"Connect your energy monitor to your meter"** on page 10.



My Energy Monitor doesn't stay connected when I have it installed on my fridge.

Your Energy Monitor should be able to connect to a meter from up to 30 meters away; however, there are many variables which affect this distance such as interference or the type of construction of your home. You may need to move your Energy Monitor closer to your meter.

Use the supplied cradle to locate your Energy Monitor in a convenient spot closer to your meter.



No suitable meter found. Touch a button to try again

Troubleshooting your Energy Monitor

My Energy Monitor doesn't stick to my fridge.

Unfortunately some fridges are not sufficiently magnetic to hold the Energy Monitor. If this is the case you should use the supplied cradle instead.

My Energy Monitor shows dashes in kWh views.

Your Energy Monitor downloads your usage history from your meter. If the meter has only recently been installed or the meter on your home does not support data history then there may not be enough information to provide you with your historical usage when your Energy Monitor is first connected to your meter.

Also, when your Energy Monitor is first connected to your meter it can take as long as 20 minutes to download your usage history. In either case your Energy Monitor will automatically show your usage once it has collected enough usage information from your meter.



Troubleshooting your Energy Monitor

Dashes are shown in \$ views.

This occurs when your Energy Monitor does not have information about your electricity prices. If your meter doesn't provide your electricity price information automatically to your Energy Monitor then you will need to manually enter this information. Follow the instructions on page 14 to do this.



The Usage Indicator is not shown.

When your Energy Monitor doesn't have enough usage history to calculate comparisons it will not show the Usage Indicator. Your Energy Monitor will automatically enable the Usage Indicator once it has enough usage information. This may take a few weeks.



Troubleshooting your Energy Monitor

My Energy Monitor is not waking up or appears stuck.

Ensure that your Energy Monitor's battery is charged by plugging it into a mains socket with the power adapter. The battery indicator will stop flashing when it is fully charged. If your Energy Monitor is still "stuck" then press the reset button for one second using a paper clip.

Warning: If you hold the reset button down for too long (5 seconds) your energy monitor will be told to disconnect from your meter. If this happens you will need to follow the instructions on page 10 to reconnect your Energy Monitor to your meter.



If this does not resolve the problem then contact na-support@percepcion.com

The Usage Indicator does not switch on.

Some meters only update information to the Energy Monitor every 30 or 40 seconds; this means it may take a while after switching an appliance on or off to see the change in usage.

Frequently asked questions

What if I move house or my meter is changed?

If you move house or if your meter is replaced, you will need to follow the instructions on page 10 to re-connect your Energy Monitor to your new meter.

You will also need to reset your Energy Monitor by using a paperclip to press and hold the reset button for 5 seconds to tell it to disconnect from your old meter and start connecting to the new meter.



5 Seconds

What is the Energy Monitor wireless range?

The Energy Monitor has a range of approximately 30m from your meter in typical suburban environments. Range is dependent on factors such as the type of construction of your house and any interference from other devices.

The Energy Monitor shows signal strength bars (like your mobile phone) to indicate the strength of the connection. In a typical house it should work OK in most rooms.

What is the battery life?

The battery will last approximately 2 months from fully charged under normal usage. When your battery becomes flat, simply place it back into the cradle provided and connect it to the power using the power adapter provided.

Frequently asked questions

Can I replace the battery?

No, the battery is permanently installed.

What private information does my Energy Monitor store, and how can I clear it?

Your Energy Monitor stores some information about your energy use which may be considered private. This includes your electricity prices (how much you pay for electricity) and your usage history (how much electricity you used at different times of day). It stores this information so that it can calculate the cost of your usage (such as how much you spent today, this week or this month).



15 Seconds

To clear all private information from your Energy Monitor, use a paperclip to press and hold the reset button for 15 seconds. The Energy Monitor will disconnect from your meter, reboot and all stored information will be cleared. You will need to follow the instructions on page 10 to re-connect your Energy Monitor to your meter, you will also need to re-enter your electricity prices

How is my solar export / feed in displayed?

If you have solar electricity, your Energy Monitor will show the net result of your draw from the grid and your feed-in to the grid in kW, kWh and \$ views.

If your net is negative, the Energy Monitor will show negative numbers.

Operating Environment

Operating your Energy Monitor outside of these ranges may impact its operation or battery life:

- Storage temperature: 0°C to +55°C
- Operational temperature: 0°C to +40°C
- Storage and transport humidity: 10% to 93% (non-condensing)
- Operational humidity: 10% to 93% (non-condensing)

Power :

- Average power consumption: less than 0.6W
- Input: AC 100 - 240V 50/60Hz, 130mA
- Output: DC5.0V ±5% 1A
- MEPS: Minimum Energy Efficiency Level V

United States

- FCC Class B, Part 15

FCC ID: 2AALMPVU-G2NA

Australia

- C-Tick 30990

Radio Frequency Interference: AS/- NZS CISPR22
2009 Class B, AS/NZS 4268

Safety (Power Adaptor):

- UL 60950-1, CSA-C22.2 NO. 60950-1,
AS/NZS 60960.1

Warranty & Information

Warranty

Your energy monitor comes with a limited warranty against defects for 12 months from the date of delivery.

Perceppcion Support Contact Details

For customer support

please email na-support@perceppcion.com
or visit perceppcion.com/na-support

You can find other helpful information and frequently asked questions relating to your Energy Monitor by visiting our support and advice pages online at:

perceppcion.com/energymonitor

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